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IN THE SPECIFICATION:

Please add the following new paragraphs after paragraph [0038]:

[0038.1] As noted above with respect to Figure 1, the operational support system (OSS) 110, the network management system (NMS) 120, the network element management system (EMS) 130, and the network analysis engine module 150 are provided within the data communication network management system 100. As known to those skilled in the art, each of these functional elements is implemented by a computer system executing software to perform various functions. Further, as noted above, it is preferable that the network analysis engine module is a software-based engine which may share the same platform (i.e., software platform) as the network management system and/or the network element management system. This advantageously provides lower maintenance cost than maintaining additional software platforms.

[0038.2] Therefore, in various embodiments of the invention, any or all of the operational support system, the network management system, the network element management system, and the network analysis engine module are implemented within the context of a computer system having at least a processor for executing instructions, a memory for storing instructions to be executed, and an input/output functionality for receiving instructions. Thus, a computer executing software instructions, according to the present invention, implements various functionalities described herein with respect to any or all of the operational support system, the network management system, the network element management system, and the network analysis engine module. Thus, in one embodiment of the invention, the method steps implemented in any of the operational support system, the network management system, the network element management system, and the network analysis engine module are implemented after being stored in memory, and executed by a processor to achieve various functions.